WASHINGTON AGRICULTURAL CHEMICAL USAGE SWEET CORN, PROCESSING August 2003

WASHINGTON AGRICULTURAL STATISTICS SERVICE

U.S. Department of Agriculture
Washington Agricultural Statistics Service

SWEET CORN, PROCESSING

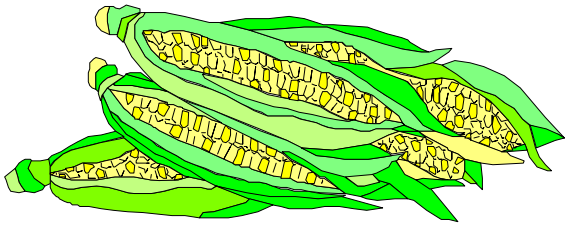
Results of the 2002 Vegetable Chemical Use Survey are presented in the following tables. The survey was designed to collect data on chemical applications made from the end of the 2001 harvest through completion of the 2002 harvest from a sampling of vegetable growers in Washington. Targeted crops in Washington included asparagus, processing carrots, processing sweet corn, dry onions, and processing green peas. The probability nature of the survey allowed for estimates that are representative of chemical use on all targeted vegetables in the state.

Survey results include estimates of total area treated, number of applications, rates per application and per crop year, and total pounds of chemicals applied. Data are summarized for the primary nutrients and for the active ingredients of pesticides and other chemicals applied. Pesticide data were collected for specific formulations of active ingredients (trade name products) and then converted to active ingredient. Therefore, the estimates associated with a particular active ingredient may represent applications of several trade name products. Pesticide application rates also reflect partial coverage applications as a result of band, spot, and alternate row spraying techniques.

Five states were surveyed for **processing sweet corn** in 2002: Minnesota, New York, Oregon, Washington, and Wisconsin. Surveyed acreage totaled 388,400 acres and Washington accounted for 25 percent of total surveyed acreage.

A higher percentage of herbicides were used on processing sweet corn acres. Herbicides were used on 84 percent of the surveyed acres. Atrazine was applied to 65 percent of the acreage, s-metolachlor was on 27 percent, and dimethenamid-P on 24 percent. Almost as many acres were treated with insecticides as states reported 82 percent of the acres covered. The two predominately used were lambda-cyhalothrin on 51 percent of the acres and zeta-cypermethrin on 16 percent. Fungicides were only reported on 6 percent of the acreage. Propiconazole and azoxystrobin were the main fungicides utilized.

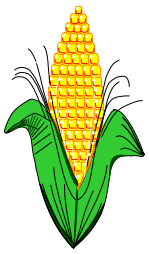
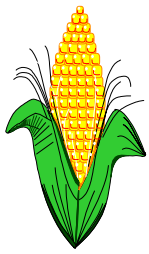
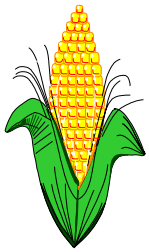
Nitrogen fertilizer was applied to 93 percent of the acreage in the five surveyed states. Phosphate was applied to 81 percent of the acreage and potash was applied to 75 percent of the acreage in the five states.



Sweet Corn, Processing: Pesticide Applications, Total Acreage & Percentage Receiving Applications, Major States & Total, 2000 & 2002

State	Planted Acreage		Area Receiving 1/							
			Herbicides		Insecticides		Fungicides		Other Chemicals	
	2000	2002	2000	2002	2000	2002	2000	2002	2000	2002
	Acres		Percent							
Illinois	17,400	-	90	-	93	-	57	-	**	-
Minnesota	136,900	148,000	95	70	90	95	31	13	**	**
New York	30,700	17,600	96	93	87	62	36	**	**	**
Oregon	35,800	33,000	96	98	49	38	**	**	**	**
Pennsylvania	2,300	-	13	-	13	-	**	-	**	-
Washington	101,800	97,700	78	89	44	80	**	**	**	**
Wisconsin	94,900	92,100	92	95	83	85	28	**	**	6
TOTAL	**419,800**	**388,400**	**90**	**84**	**73**	**82**	**22**	**6**	*	**2**

\- *Illinois and Pennsylvania were not surveyed in the 2002 Vegetable Chemical Use Survey.*
* *Area applied is less than one percent.*
** *Insufficient reports to publish percent of area receiving.*
1/ Refers to acres receiving one or more applications of a specific pesticide class.

Sweet Corn, Processing: Fertilizer Use Percent of Acres Treated, Major States, Total 2000 & 2002

State	Planted Acreage		Percent of Acres Treated 1/					
			Nitrogen		Phosphate		Potash	
	2000	2002	2000	2002	2000	2002	2000	2002
	Acres		Percent					
Minnesota	136,900	148,000	-	88	-	72	-	57
New York	30,700	17,600	-	100	-	100	-	99
Oregon	35,800	33,000	-	98	-	91	-	89
Washington	101,800	97,700	-	92	-	84	-	71
Wisconsin	94,900	92,100	-	100	-	87	-	97
TOTAL	**419,800**	**388,400**	**-**	**93**	**-**	**81**	**-**	**75**

1/ Refers to acres receiving one or more applications of a specific fertilizer ingredient.
\- *Fertilizer use was not included in the 2000 Vegetable Chemical Use Survey.*

Sweet Corn, Processing: Agricultural Chemical Applications, Washington, 2000 & 2002 1/

Active Ingredient 2/	Area Applied 3/		Applications		Rate Per Application		Rate Per Crop Year		Total Applied	
	2000	2002	2000	2002	2000	2002	2000	2002	2000	2002
	Percent		Number		Pounds Per Acre				1,000 Pounds	
Herbicides										
2, 4-D	3	-	1.0	-	0.49	-	0.49	-	1.4	-
Alachlor	20	12	1.0	1.0	2.37	2.37	2.52	2.46	52.2	28.5
Atrazine	47	68	1.0	1.1	0.66	0.75	0.70	0.84	33.6	55.7
Bentazon	5	5	1.0	1.0	0.69	0.12	0.70	0.12	3.7	0.5
Carfentrazone-ethyl	-	11	-	1.0	-	0.02	-	0.02	-	0.2
Dimethenamid	-	2	-	1.0	-	0.99	-	1.05	-	1.7
Dimethenamid-P	-	37	-	1.0	-	0.65	-	0.66	-	23.9
EPTC	7	6	1.0	1.0	3.50	3.24	3.53	3.28	24.6	20.1
Fluroxypyr	8	25	1.0	1.2	0.15	0.12	0.15	0.15	1.2	3.8
Glyphosate	19	49	1.1	1.0	0.53	0.52	0.62	0.54	11.7	25.9
Metolachlor	29	-	1.0	-	1.45	-	1.47	-	43.9	-
Nicosulfuron	3	-	1.0	-	0.04	-	0.04	-	0.1	-
Pendimethalin	32	52	1.0	1.4	0.71	0.47	0.73	0.69	23.7	35.0
S-Metolachlor	-	20	-	1.0	-	1.12	-	1.12	-	22.4
Insecticides										
Bifenthrin	-	5	-	2.3	-	0.04	-	0.11	-	0.5
Chlorpyrifos	6	9	1.2	1.0	0.66	1.15	0.83	1.17	4.9	10.7
Lambda-cyhalothrin	-	23	-	1.7	-	0.02	-	0.04	-	0.9
Permethrin	-	5	-	1.2	-	0.16	-	0.20	-	0.9
Zeta-cypermethrin	-	35	-	2.1	-	0.05	-	0.11	-	3.6

1/ Planted acres in 2000 and 2002 for Washington were 101,800 acres and 97,700 acres respectively.
2/ Insufficient reports to publish data for the following agricultural chemicals: 2000: Herbicides: Cyanazine, Dimethenamid, MCPA, Paraquat, S-Metolachlor, Trifluralin. Insecticides: Azadirachtin, Bifenthrin, Ethoprop, Lambda-cyhalothrin, Permethrin, Spinosad. 2002: Herbicides:2,4-D, 2,4-D, Dimeth. salt, Nicosulfuron, Paraquat, Propachlor. Insecticides: Cyfluthrin, Esfenvalerate, Ethoprop, Methidathion, Petroleum distillate, Tefluthrin. Fungicides: Azoxystrobin, Sulfur. Other Chemicals: Monocarbamide dihyd.
3/ Refers to acres receiving one or more applications of a specific agricultural chemical.
Note: Data may not multiple across due to rounding.

Sweet Corn, Processing: Agricultural Chemical Applications, Major States, 2000 & 2002 1/

Active Ingredient 2/	Area Applied 3/		Applications		Rate Per Application		Rate Per Crop Year		Total Applied	
	2000	2002	2000	2002	2000	2002	2000	2002	2000	2002
	Percent		Number		Pounds Per Acre				1,000 Pounds	
Herbicides										
2, 4-D	4	3	1.4	1.2	0.47	0.34	0.68	0.41	11.4	4.4
Alachlor	19	12	1.0	1.0	2.08	1.96	2.17	2.01	173.9	93.1
Atrazine	63	65	1.0	1.0	0.71	0.74	0.75	0.78	198.8	196.4
Bentazon	23	17	1.0	1.0	0.52	0.35	0.53	0.35	51.4	23.3
Carfentrazone-ethyl	2	11	1.0	1.0	0.008	0.01	0.008	0.01	0.1	0.4
Cyanazine	9	2	1.0	1.1	0.96	0.94	0.98	1.08	35.9	6.7
Dimethenamid	17	6	1.0	1.0	1.25	1.19	1.28	1.20	91.0	27.0
Dimethenamid-P	-	24	-	1.0	-	0.71	-	0.73	-	66.7
EPTC	5	5	1.0	1.0	3.64	3.95	3.71	4.01	71.1	80.0
Fluroxypyr	2	6	1.0	1.2	0.15	0.12	0.15	0.15	1.2	3.8
Glyphosate	9	17	1.1	1.0	0.56	0.53	0.67	0.55	25.2	37.7
MCPA	*	-	1.0	-	0.30	-	0.30	-	0.4	-
Metolachlor	28	-	1.0	-	1.69	-	1.70	-	203.0	-
Nicosulfuron	8	10	1.0	1.0	0.03	0.03	0.03	0.03	1.1	1.1
Paraquat	*	4	1.0	1.0	0.43	0.35	0.46	0.37	1.5	5.1
Pendimethalin	11	15	1.0	1.4	0.76	0.52	0.77	0.74	34.4	44.3
S-Metolachlor	6	27	1.0	1.0	1.35	1.42	1.38	1.44	36.3	152.8
Simazine	-	*	-	1.0	-	0.95	-	0.95	-	2.9
Insecticides										
Bifenthrin	36	12	2.5	2.2	0.04	0.04	0.09	0.09	14.0	4.2
Carbofuran	1	-	1.0	-	0.93	-	0.93	-	4.1	-
Chlorpyrifos	5	4	1.0	1.0	1.11	1.19	1.20	1.20	25.2	20.6
Cyfluthrin	3	-	1.6	-	0.04	-	0.06	-	0.7	-
Esfenvalerate	*	*	1.0	1.5	0.02	0.03	0.02	0.05	**	0.2
Ethoprop	2	1	1.0	1.0	1.60	1.10	1.61	1.14	10.3	5.4
Lambda-cyhalothrin	26	51	2.2	3.0	0.02	0.02	0.05	0.07	6.0	14.2
Methyl parathion	2	-	1.2	-	0.48	-	0.59	-	5.5	-
Permethrin	15	5	1.9	1.3	0.15	0.14	0.30	0.18	19.6	3.7
Petroleum distillate	-	*	-	1.0	-	3.17	-	3.17	-	10.9
Tebupirimphos	*	-	1.0	-	0.14	-	0.14	-	0.2	-
Tefluthrin	2	1	1.0	1.0	0.11	0.10	0.11	0.10	0.7	0.5
Terbufos	2	-	1.0	-	1.06	-	1.07	-	6.8	-
Zeta-cypermethrin	-	16	-	1.9	-	0.05	-	0.10	-	5.8
Fungicides										
Azoxystrobin	-	4	-	1.0	-	0.10	-	0.11	-	1.5
Propiconazole	19	4	1.8	1.1	0.11	0.11	0.20	0.12	16.0	2.1
Other Chemicals										
Aminopyridine	3	2	1.8	1.9	-	0.000	-	0.001	-	**

* *Applied on less than one percent of acres.* ** *Total applied is less than 50 pounds.*

1/ Planted acres in 2000 for the 7 major states were 419,800, and planted acres in 2002 for the 5 major states were 388,400 . States included in 2000 were IL, MN, NY, OR, PA, WA & WI. States included in 2002 were MN, NY, OR, WA, & WI.

2/ Insufficient reports to publish data for the following agricultural chemicals: 2000: Herbicides: Acetic acid, Ametryn, Butylate, Halosulfuron, Imazethapyr, Pyridate, Simazine, Trifluralin. Insecticides: Azadirachtin, Methomyl, Oxydemeton-methyl, Petroleum distillate, Spinosad. Fungicides: Mancozeb, Vinclozolin. Other Chemicals: Metaldehyde. 2002: Herbicides: 2,4-D, Dimeth. salt, Acetic acid, Fluazifop-P-butyl, Glyphosate diam salt, Halosulfuron, Mesotrione, Metolachlor, Prometryn, Propachlor, Sulfosate, Vernolate. Insecticides: Carbofuran, Cyfluthrin, Malathion, Methidathion, Methomyl, Methyl parathion, Oxydemeton-methyl, Tebupirimphos. Fungicides: Sulfur. Other Chemicals: Harpin protein, Monocarbamide dihyd.

3/ Refers to acres receiving one or more applications of a specific agricultural chemical.

Note: Data may not multiple across due to rounding.